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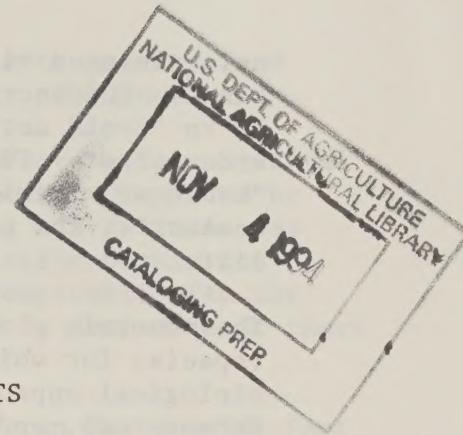
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RECORD OF DECISION
for the
MOUNTAIN PLOVER MANAGEMENT STRATEGY

USDA FOREST SERVICE
PAWNEE NATIONAL GRASSLAND
ARAPAHO AND ROOSEVELT NATIONAL FORESTS
Weld County, Colorado



I. INTRODUCTION

The purpose of the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) is to determine a conservation management strategy to provide effective nesting habitat on the Pawnee National Grassland (PNG) in order to contribute to maintaining a viable population of the mountain plover (Charadrius montanus), a small bird, throughout its range. Management of the PNG alone cannot insure viable populations as factors responsible for population declines may occur on lands of other ownership throughout the seasonal habitats of this migratory species. The declines may be due to shrinking nesting or winter habitat, or other environmental factors.

The PNG is located in northeast Weld County, approximately 35 miles northeast of Greeley, Colorado. The National Grassland is 193,060 acres of federally owned tracts intermingled with privately owned farms and ranches. Of that total acreage, approximately 172,678 acres are considered potential plover habitat, after steeper terrain and cliff areas are subtracted.

The intent of the preferred management strategy is to maintain the existing plover nesting habitat on the Pawnee, and if the species is listed as threatened or endangered, to provide effective habitat that may be necessary for its recovery prior to the establishment of a recovery plan by US Fish and Wildlife Service (FWS).

A purpose of the FEIS is to disclose the environmental consequences of alternative mountain plover conservation strategies on the Pawnee. Plover populations have declined and there is concern whether viable numbers and sufficient nesting, brooding, rearing, and winter habitat can be maintained throughout its range. The FEIS analyzes the potential effects of all management activities on the plover on the PNG and surrounding private lands (to the extent data is available) and discusses what can be done on the PNG to maintain nesting habitat capability. These activities include livestock grazing, recreation, wildlife, minerals, travel and other management that may affect the plover.

The National Forest Management Act of 1976 (NFMA) regulations require that "fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area" (36 CFR 219.19). The PNG is one planning area, but as previously stated,

maintaining a viable plover population depends on factors throughout its range. The Secretary of Agriculture's Department Regulation 9500-4 directs the FS to "avoid actions which may cause a species to become threatened or endangered". FS policy states that for sensitive species, the agency must "avoid or minimize impacts to species whose viability has been identified as a concern". The plover is listed as a sensitive species on the draft Region 2 list.

The mountain plover is a US Fish and Wildlife Service (FWS) Category 1 species (species for which the FWS has substantial information on hand to support the biological appropriateness of proposing to list the species as threatened or endangered), and could be proposed for listing in the future.

The plover is also a management indicator species in the Arapaho and Roosevelt National Forests and Pawnee National Grassland Land and Resource Management Plan (Forest Plan). It was selected for monitoring to assess population viability and if particular environmental conditions are being maintained.

A factor in establishing the need for the FEIS and resource management decisions was industry proposals for approximately 32,000 acres in 25 oil and gas leases on the Grassland in the fall of 1990. Due to concerns regarding the plover, the Forest Service and Bureau of Land Management (BLM) delayed all federal leasing decisions within the administrative boundary of the Grassland, pending the completion of an Environmental Assessment (EA) and Decision Notice. Ten additional leases were proposed, increasing the total acreage to 38,423. At that time, approximately 600 acres were not considered plover habitat due to steep topography and about 1640 acres consisted of brushy or taller grasses that are not plover nesting habitat. Therefore, the majority of the proposed lease acreage, about 36,200 acres, was considered to be possible nesting habitat for the plover. When the EA was completed, the FS determined that a "Finding of No Significant Impact" could not be made and decided to complete an EIS, and an associated Record of Decision (ROD).

The FEIS addresses the issues and concerns raised during discussions with the public, other agencies, and from Forest Service (FS) staff. It describes the environmental effects of four possible conservation strategies for mountain plover, and was completed before this Record of Decision. The ROD will specify decisions for a conservation management strategy to protect the plover and maintain its nesting habitat on the Grassland. Decisions regarding whether or not to implement intensive grazing systems, oil and gas leasing and management, and recreation, lands, wildlife, recreation, and other resource management will be discussed.

Environmental consequences on lands and activities administered by other federal, state, and local jurisdictions resulting from the preferred action are disclosed in this FEIS. Through cooperation, these other jurisdictions have assisted in the disclosure of environmental consequences and development of alternatives. The Forest Service has discussed the many variables, issues, and effects of all four alternatives with Dr. Fritz Knopf, Leader Avian Studies, National Biological Survey (NBS), and Dr. Walter Graul, Northeast Regional Manager, Colorado Division of Wildlife (CDOW), and the Bureau of Land Management (BLM). Dr. Knopf and Dr. Graul are the acknowledged experts on the mountain plover and its habitat. The results of these discussions constitute

Alternative 4, the preferred alternative, and are based on the surveys and observations completed, including those since the DEIS was published.

Breeding bird surveys from 1966-1987 show a decline in the overall continental population of mountain plover. Local population estimates were reported by Graul and Webster in 1978. However, Graul points out that his estimate was only designed to determine order of magnitude and not specific population numbers. He further explains that this estimate is not comparable with the data of current trend studies. There is no confident way to determine if there have been local losses based on these figures.

Although declines are speculated, current studies need to run for a sufficient period of time to determine if populations are truly declining. Surveys completed in 1991 by Knopf indicate that only 4,360 to 5,610 plover remain on the continent. As the Pawnee is a nesting stronghold for the species, action is needed to insure there is adequate nesting habitat to contribute to a viable population.

The preferred alternative, Alternative 4, is discussed in the FEIS and contains elements of Alternatives 1 and 2. The analysis of these elements is included within the full range of management actions considered in the Draft EIS. Although the DEIS described Alternative 2 as the proposed action, Alternative 4 resulted from additional data and analysis from the Forest Service, NBS, CDOW, and public comments on the DEIS.

Note that the resource management and leasing decisions will be tiered to the current Forest Plan and EIS and the Mineral Leasing Supplement of 1985. The resulting conservation management strategy discussed in this ROD will become an amendment to the current Forest Plan, where it differs from direction in the Plan.

The Forest Plan is currently being revised, with the Revision scheduled for completion in FY95. Management area prescriptions and standards and guidelines are being updated to reflect biodiversity and ecosystem management. However, where those directions conflict with the management strategy in this FEIS and ROD, and with the best available information at that time, the needs of the plover will dominate.

The FEIS broadly applies to all nesting habitat located within the breeding range of mountain plover. Forest Service units and other agencies, such as the BLM, having land management responsibilities within the plover's breeding range may tier to this document as part of their decision-making process. Decision makers will need to review this document to determine applicability of the analysis to their site-specific situations. Some of the analysis in this EIS is specific to the PNG only. For example, oil and gas activities were analyzed only up to the levels of activity predicted by the Reasonable Foreseeable Development (RFD) scenario prepared for this area.

The BLM is a cooperating agency for the FEIS. Approximately 21,522 acres of federal minerals under private surface occur within the administrative boundary of the Grassland and are managed by the BLM. Other such parcels occur outside that boundary. Leasing these minerals is subject to federal laws, regulations,

and policies, as it is a federal action. The BLM will issue its own separate Record of Decision, based on analyses in the FEIS.

II. DECISION AND REASONS FOR THE DECISION

In making my decision, I have relied heavily on information in the accompanying FEIS. The alternatives I considered are discussed in Chapter 2 of the FEIS, and the environmental effects are described in Chapter 4.

My decision is to implement Alternative 4 - Manage resources to maintain mountain plover populations and nesting habitat capability until the requirements to maintain viable populations of the species have been determined and can be implemented on the Pawnee National Grassland. Resource management that is not significantly detrimental separately or cumulatively will be continued as described in the Forest Plan, or with needed mitigations.

This alternative provides interim management actions that will concentrate on maintaining conditions known to be favorable to mountain plover, while halting activities that are known to be significantly detrimental or have potential to be significantly detrimental to the species. Oil and gas leasing will resume. Pending additional information, new intensive grazing systems will not be implemented until a more site-specific analysis is completed; current vegetative conditions (seral stages) will be maintained; plover predator habitat will not be enhanced; and recreation use will be moderately restricted. Wildlife habitat considerations will concentrate on plover and other endemic species habitat requirements. If there is competition with other wildlife species (except for proposed, threatened, or endangered species), allocation of resources and management will favor the plover and other endemics.

The specific management strategies, reasons for the strategies, and possible monitoring and research (depending on available funds and resources) for each resource activity are discussed below.

Wildlife Management

Specific Management:

Livestock grazing will be used to manage vegetation to maintain nesting habitat for the plover.

Structural and nonstructural wildlife improvement projects will be completed to improve habitats for waterfowl and other nongame wildlife species. New improvement projects for predatory or competing species will not occur.

The primary period for protection of nesting plover is April 10 - July 10. If construction of new improvements are needed during this period, a plover clearance survey by qualified Forest Service personnel will be required.

Prairie dogs will be managed to maintain between 12 and 30 prairie dog towns on 200 to 1,000 acres as described in the Forest Plan.

Maintenance and protection of all existing wildlife structural and nonstructural improvements will continue. Maintenance will not be done during April 10 - July 10. Maintenance needed during this period will be subject to a plover clearance survey.

All other field administration, including wildlife surveys, will generally not be scheduled during April 10 - July 10. However, administration such as the annual raptor nesting survey must take place during this time to be effective.

Reasons for the Management:

The plover clearance survey is an important mitigation measure for decreasing management disturbance to plover. If a plover nest or plover exhibiting prenesting behavior are observed within the area of human disturbance (based on a 200 meter radius of disturbance around where the human activity occurs, or approximately 30 acres for a point activity), the project will be delayed 30 days. This will allow for hatching and dispersal from the nest site. At that time, another survey will be completed to insure new nesting has not occurred. The clearance survey procedure can apply to recreation, range, and other resource managements where the project area is small and personnel are available for the survey. The 200 meter distance was based on observations of plover near oil and gas developments. As plover have been seen nesting much closer than this distance, it is considered to be a conservative estimate for determination of potential effects.

The FEIS considers an acreage to have decreased habitat effectiveness if human activity occurring on that area during April 10 - July 10 could disturb a nesting bird. Some of the activities will be very brief; for example, inspecting a wildlife enclosure for maintenance needs for 15 minutes is not considered significant. However, repairing the enclosure could take several hours and could be a significant disturbance to a nesting plover in the area. The acreages disturbed as discussed for the following resource management assume that human activity on those acres could cause a reduction in nesting habitat effectiveness.

Wildlife habitat improvements are generally small in area, and the reduction of plover nesting habitat is normally not significantly detrimental. Knopf and Graul will be contacted where potentially significant impacts from projects could occur, to assist in the determination of significance and possible mitigations. If the effects are found to be significant, the project will be cancelled or modified to eliminate significant impacts.

The detrimental effects on nesting plover and nesting habitat effectiveness will be mitigated by accomplishing projects outside April 10 - July 10 when possible. The clearance survey will be used where appropriate.

Nesting habitat effectiveness will not be reduced by improvement projects for species known to be predators of the plover, particularly the ferruginous hawk and the swift fox.

As prairie dogs have not been shown to be significantly detrimental or beneficial to the plover and its nesting habitat on the Pawnee, management will continue as described in the Forest Plan.

Monitoring and Research:

Summer plover surveys of the Grassland by FS crews will continue, subject to funding, personnel, and resource availability. These surveys will contribute data regarding nesting, brooding, and rearing habitat requirements, what is and is not nesting habitat on the Pawnee, Grassland populations, and behavior of the plover. It is expected that the NBS will continue surveys for plover data on the Grassland and throughout its range, subject to funding, personnel, and resource availability. The effects of other resource management on plover habitat will also be observed.

Observations of other researchers, and volunteers where appropriate, will also be used.

Computer analysis of habitat characteristics, including slopes of the topography, will be finalized.

Range and Vegetation Management:

Specific Management

The 11 Allotment Management Plans (AMP) currently implemented for intensive rotation grazing systems will continue. The four partially implemented and the seven AMPs not yet implemented will not be fully implemented at this time.

New water developments will continue to be constructed in allotments where better distribution of livestock grazing is needed. Construction of new cross-fencing to divide allotments into rotation pastures will be delayed. Old fences in need of replacement will be replaced.

Construction of new water developments or replacement of fences will require a plover clearance survey if scheduled during April 10 - July 10. Maintenance of existing range improvements will be allowed through this time period and be subject to plover clearance surveys where needed. Maintenance necessary to maintain current levels of livestock use for plover habitat effectiveness will not require a clearance survey. The need for surveys will be decided on a case-by-case basis.

Reasons for Management:

The Pawnee has been grazed by livestock since 1937. Grazing has been season-long for most of that time, and on some allotments, the entire time. Season-long means livestock remain on the same pasture for the entire grazing season, approximately May 15 - October 15. The utilization standard has been to graze the vegetation so that at the end of the season approximately 300 pounds of forage per acre were left when the livestock were removed. This standard has resulted in all range sites being grazed to the same level, regardless of the vegetation species and composition potential of the site. There is a concern from some specialists and publics that changing the utilization standard and implementing intensive grazing systems would detrimentally reduce nesting habitat effectiveness on approximately 17,249 acres.

I believe that a primary management issue on the Grassland is conversion of plover nesting habitat to vegetation that is not suitable for nesting, a possible result of intensive grazing systems. At this time, additional

intensive systems will not be implemented until more site-specific analysis regarding the effects of those systems on the species' habitats is completed.

The utilization standard for grazing will be to continue leaving 300 pounds of forage per acre on all range sites topographically suitable for nesting habitat.

The systems currently implemented could affect 5,369 acres in 5-10 years, but at this time, that amount is not considered significantly detrimental, as discussed in the FEIS Chapter 4.

To reduce detrimental effects on the plover and any resulting reduction in nesting habitat effectiveness, new construction and maintenance of range improvements will not occur during April 10 - July 10 without a plover survey, unless needed to maintain current levels of livestock use that maintains plover habitat effectiveness. As there are 140 range improvements such as windmills and tanks currently constructed for livestock management, maintenance of these facilities may affect 4,200 acres of nesting habitat.

The Forest Service will complete an EA and Decision Notice for the management of 48 allotments on the west side of the PNG in 1994. The analysis will examine the site-specific relationship between grazing practices and plover nesting, brooding, and rearing habitat, while considering biodiversity, other endemic species, potential vegetation, seral stages, and other resource management. Additional mitigation may be needed, or existing requirements may be modified or eliminated.

A similar EA will be prepared for an additional 79 allotments on the east side of the Grassland in 1996, based on the best information available at that time.

Monitoring and Research:

Forest Service and NBS personnel will continue planned surveys of the plover, subject to funding, personnel, and resource availability.

Oil and Gas Management:

Specific Management:

Leasing of federal parcels will resume with the stipulations below to mitigate the effects of oil and gas activities on nesting habitat, and will continue as described in the Forest Plan, the Mineral Supplement, and this FEIS.

Supplemental timing limitation stipulations for lease proposals and conditions of approval for drilling proposals will include the following requirements to protect the plover and its nesting habitat during April 10 - July 10:

1. Drilling, construction of production facilities, and plugging and abandonment of wells during April 10 - July 10 is prohibited.
2. Production facilities will be collocated on previously constructed roads, where feasible, to minimize disturbance to the plover and loss of habitat from constructed roads.

For proposed lease parcels with federal minerals under private surface within the administrative boundary of the Grassland, the Forest Service will provide

input to the BLM on needed mitigations, based on the analysis and decisions made in the FEIS. This mineral estate is approximately 21,522 acres within the administrative boundary, and the BLM will make leasing decisions on that acreage in accordance with that agency's Record of Decision, based on this FEIS. The private surface over many of these federal mineral parcels is wheat fields, otherwise cultivated, or weeds.

The Forest Service will continue to negotiate with operators proposing activities for private mineral estates under the Grassland surface to gain compliance with the same requirements as for federal leases. This mineral estate is approximately 58,113 acres (30% of the Grassland).

Vibroseis exploration and other prospecting will not be authorized during April 10 - July 10.

Proposals for uranium leases and other mineral development such as gravel pits will be evaluated based on the probable effects on all resources, including the plover, in the appropriate NEPA document.

Reasons for Management:

Resuming leasing of the federal mineral estate will be controversial for some individuals and groups. The Forest Service, after discussing the impacts with specialists from other agencies, has determined that the detrimental effects on plover nesting habitat of existing oil and gas activities and those predicted in the RFD are not significant, with the mitigations described above.

Over the next ten years, the RFD predicts that an additional 10 producing wells will be located on the Grassland surface. When this development is added to the facilities for the existing 47 producing wells and 10 production facilities separate from the wellheads, and future plugged and abandoned wells are reclaimed (approximately two producing wells are assumed to be plugged and abandoned per year, 20 total during the ten years), the average annual physical surface disturbance is less than 250 acres.

The reduction in nesting habitat effectiveness is determined by using the existing facility affected acreage, 1650 acres (based on 30 acres per wellhead and production facility, and considering that four facilities are adjacent to private cultivated fields and affect only 15 acres on the Grassland). The additional ten wells will affect an additional 300 acres, and the 20 plugged and abandoned wells will allow 600 acres to be reclaimed over the ten years. In ten years, the estimated area of reduced nesting habitat effectiveness is 1,350 acres. However, for comparison in the analysis, the five year estimate, 1,500 acres was used. The acreage is less than .9% of the potential nesting habitat on the Grassland. The amount decreases because more existing wells will be plugged and abandoned than new wells will be discovered.

The RFD predicts one additional producing well on the federal mineral estate under private surface and managed by the BLM within the Grassland administrative boundary. Currently there are eight wells in this estate assumed to be in plover habitat. Adding one additional well, and subtracting one existing producing well that will be plugged and abandoned, the affected acreage at five years is 240 acres. At ten years, the acreage will be 210 acres as an additional well will be abandoned.

These acreages assume that all development will occur in nesting habitat. Some will occur in areas with steeper slopes or taller vegetation on the Pawnee, and some could occur on private cultivated lands where the federal minerals are managed by the BLM. These areas are not considered nesting habitat, so the affected acreage will certainly be less than the above conservative estimates.

The detrimental effects of drilling and plugging and abandoning a producing well (noise, vehicle traffic, and human activity) will be mitigated by prohibiting these activities during the April 10 - July 10 nesting period.

Production activities are the concern for oil and gas management. Graul's 1969-72 surveys for plover on the Pawnee found one of the highest concentrations of birds near a well and production facilities drilled and completed in 1956. Some of the surveys were made from the top of the tank battery. Knopf noted more plover were found in surveys during 1989-91 after three wells were drilled and completed in the Claybasket Field. This may not indicate that the field was beneficial for the species, but does not show it was detrimental. Knopf, Graul, and the Forest Service surveys have found plover within 10 yards of production facility fences and nesting within 100 yards of the facilities. Habitat fragmentation and mortality from roads, the possibility of predator traps created by the roads, the minor loss of habitat, and effects on reproduction due to a loss of habitat effectiveness have been determined not to be significant using the mitigation requirements previously discussed, and described in FEIS Chapter 4.

Placing production facilities on previously constructed roads with existing vehicle activity will mitigate this impact. Tanker trucks normally take 30-45 minutes to pick up the produced oil at a facility. As the daily maintenance visits to the wellhead by one or two persons in a pickup generally take 10-15 minutes, this activity will normally not be a significant disturbance. However, as activities at both locations have the potential to affect nesting plover, both areas are included in the reduced habitat effectiveness acreage.

Surveys of allotments with plover nesting habitat, and with and without oil field development, do not reveal evidence that the activities are significantly detrimental, as shown in Table 4-5, FEIS page 4-29.

Monitoring and Research:

During drilling and development on private mineral estates, existing federal leases, and new leases, the effects on the plover will be observed and analyzed to determine if the timing stipulations are needed. The oil and gas industry will be encouraged to cooperate in these evaluations. Proposed drilling locations and a nearby similar area that will not be affected (providing baseline data) will be surveyed for plover before the well is drilled. If the well goes to production, the earlier surveys will be duplicated the next year on both locations to determine and compare effects. If the well is a dryhole, the effects obviously cannot be determined.

Surveys will continue of existing oil and gas developments, noting habitat and plover proximity to the facilities.

If evidence is found that restrictions are not needed to protect the plover and its habitat, the restrictions will be removed with the appropriate NEPA documentation. If evidence is found that more restrictions are appropriate, the NEPA documentation will be completed, and those requirements will be added to future leases proposed, and applied to existing leases where possible.

Recreation Management:

Specific Management:

The Main OHV area in the northwestern part of the Pawnee will be open November 1 - April 9.

Additional OHV routes or areas may be designated in other locations of the Pawnee, with the same timing constraints as the Main area, and after the appropriate NEPA documentation.

Existing levels of casual dispersed recreation outside developed facilities will continue. More public contacts and educational brochures to educate the public about concerns for the plover will be implemented.

The Bird Tour on the west side of the Grassland will continue to be used on its route through plover habitat, with signs advising visitors to remain in their vehicles to minimize disturbance to the plover during nesting.

Additional recreation development and facilities for areas such as the Pawnee Buttes will be analyzed in the appropriate NEPA document, which will consider possible effects on the plover and its habitat.

Recreation event special use permit proposals will be analyzed to consider potential effects on the plover, and will not be authorized if significant disturbance would occur. Plover surveys by the Forest Service may be used to clear small areas for specific events on a case-by-case basis.

Reasons for Management:

The Forest Service, after discussions with specialists of other agencies, has determined that the existing casual dispersed use in the spring is not significantly detrimental. With the signing and brochure interpretation and contacts described above, the estimated affected area of habitat effectiveness is 1000 acres. Much of this disturbance is due to dispersed recreation activities such as bird watching on the Bird Tour and other locations, and hiking, picnicking, and camping on the Grassland.

The use at the Main OHV area is confined to the draw that is not nesting habitat, and the use is prohibited during April 10 - October 31 to eliminate disturbance to the plover and livestock in the adjacent area, and to allow the vegetation to recover. The area is used by motorcycles, three-wheelers and mini four-wheelers during the winter and early spring.

Additional recreation development on the PNG will consider effects on the plover and its nesting, brooding, and rearing habitat when deciding to mitigate impacts.

Monitoring and Research:

Recreation use on the Grassland will be monitored with observers, traffic counters, and plover surveys to determine when more restrictive measures are needed. At that time, mitigations such as requiring visitors to remain in vehicles on the Bird Tour, or closing the Bird Tour may be required.

Heritage Resource Management

Specific Management:

Archaeological field surveys will not be authorized during April 10 - July 10. Plover clearance surveys by the Forest Service may be used to clear a small area for a cultural survey during the restricted period, if needed.

Reasons for Management:

This timing limitation will eliminate possible disturbance to the plover during nesting.

No physical loss of habitat is expected from these activities.

Monitoring and Research:

None is planned, although other studies of the effects of human activities on nesting may be applicable.

Travel Management:

Specific Management:

Grassland motorized travel by the public is authorized only on designated routes. Vehicles may be driven up to 100 yards off designated routes for camping, picnicking or other activities. Cross-country travel is not permitted by the public. There are no restrictions on casual horse and foot travel at this time.

When areas are identified as critical for conducting research on mountain plover, roads in the area may be closed to the public during the research period by a Forest Supervisor's Order.

Authorized administrative vehicle use by the Forest Service and other authorized personnel on roads and cross-country will continue as needed throughout the year. Cross country travel occurring between April 10 and July 10 will be at ten miles per hour or less. Where feasible, personnel will remain in vehicles and travel will be on developed roads.

Grassland Development Roads will not be maintained during April 10 - July 10.

There will be strong emphasis on public contacts by Forest Service personnel to educate the traveling public about concerns for the mountain plover.

Reasons for Management:

Observations have revealed that nesting plover are not significantly disturbed by vehicle traffic, but that human activity outside the vehicle can cause disturbance. The mitigations discussed above will minimize those detrimental

effects. The area of nesting habitat that may be disturbed by this activity is 4,350 acres, scattered throughout the Grassland.

The disturbance from the existing recreation activities has been previously discussed, and is not thought to be significantly detrimental at this time.

The timing limitation on road maintenance prohibiting this activity during April 10 - July 10 will eliminate any road maintenance impact.

Monitoring and Research:

Use on travel routes will be monitored as described under Recreation Management above. If needed, possible future mitigation could include prohibiting vehicles from being driven 100 yards off the road, or closing roads to minimize disturbance in nesting or research areas.

Lands Management

Specific Management:

All proposed special uses will be analyzed on a case-by-case basis. Timing limitations not allowing the activity during April 10 - July 10 will be made part of the permit, where needed. A plover clearance survey may be conducted by the Forest Service if the affected area is small enough to make such a survey feasible, and personnel are available.

The Forest and Grassland land adjustment plan will be amended to consider mountain plover nesting habitat criteria for land exchanges and acquisitions.

Reasons for Management:

Proposed special uses and maintenance of existing uses will be examined to determine potential effects on the plover and its habitat. Special uses are expected to affect 100 acres of plover habitat.

Land exchanges could remove existing plover nesting habitat from federal management, and this effect will be considered when exchanges are proposed.

Monitoring and Research:

At this time, activities authorized by special-use permit will be monitored where needed.

The mitigations and requirements discussed above will be analyzed as additional data on the effects of resource management is determined. Additional mitigation may be needed, and some existing requirements may not be needed. Monitoring and research activities will be dependent on funding and the availability of resources and personnel for the Forest Service and other agencies.

In summary, Alternative 4 management includes:

- Actions will favor the plover and those wildlife species with habitat needs in the existing habitat, and may not favor other FWS species of concern.
- Nesting habitat and vegetative biodiversity from resource management will be maintained at current levels.

- Dispersed recreation opportunities such as additional trails will not be constructed. Planning for additional developed facilities will consider impacts to the plover and its habitat.
- Federal leasing for oil and gas will resume, with timing stipulations on leases and conditions of approval for proposed drilling to mitigate detrimental effects on the plover and its habitat. Oil and gas resources will continue to be developed in private and previously leased federal mineral estates. The level of development expected is discussed in the RFD in the FEIS Chapter 4.
- Livestock grazing will continue at the present stocking rate, and no additional intensive grazing systems will be implemented in order to minimize decreases in nesting habitat. Brooding and rearing habitat will not be increased, and existing grazing systems will continue, pending site-specific area analysis.
- When important habitat is identified, it may be closed to public travel.
- The estimated affected plover nesting habitat effectiveness includes:

1. Oil and gas activities (Forest Service)	- 1,500 acres.
2. Recreation activities	- 1,000 acres.
3. Heritage resource surveys	- 0 acres.
4. Range activities (Maintenance of 140 improvements)	- 4,200 acres.
5. Existing intensive grazing system affected acres	- 5,369 acres.
6. Special uses	- 100 acres.
7. Travel activities	- 4,350 acres.
Total	16,519 acres.

This acreage is 9.6% of the potential plover nesting habitat on the Grassland.

This acreage of affected plover nesting habitat capability includes human activities outside vehicles, and does not include vehicle travel on roads. As several of these activities are short term, for example, persons getting out of vehicles on roads in plover habitat, range improvement repair, and daily visits by well mechanics to oil wells, and as some of these activities do not occur in plover habitat, the total is high. This does not mean that the habitat becomes unsuitable for plover, only that these areas are affected by human activity. Plover are found in many of these areas currently. The percentage of the Grassland that is affected is based on 172,678 acres of potential habitat on the Grassland after 20,382 acres of steep and unusable terrain is removed. Note that while more analysis is needed to refine habitat requirements, some areas are definitely known to be unsuitable nesting habitat.

Some duplication of affected areas occurs. For example, oil and gas wells may be in areas affected by recreation activities.

Note that the 240 acres of reduced nesting habitat effectiveness from producing wells managed by the BLM under private surface are not included in the above estimates. The BLM will publish its decision on leasing for that mineral estate in a separate ROD.

Some publics will disagree with my selection of this alternative. The DEIS discussed Alternative 2 as the Proposed Alternative, and many publics agreed that the mitigations discussed in that document were appropriate. Particular interest was shown regarding the delay in oil and gas leasing and

implementation of intensive rotation grazing systems to improve biodiversity of flora and fauna, and to improve ecosystem management.

The primary differences between Alternatives 4 and 2 are the resumption of oil and gas leasing and the suspension of implementation of intensive grazing systems. The Forest Service has examined the many variables, issues, and effects of all four alternatives, and discussed them with the BLM, the specialists of other agencies, and various groups and individuals. As a result of these analyses and the surveys and observations completed since the DEIS was published, Alternative 4 was developed. While some resource management may be detrimental to the species or its habitat to some degree, the primary issue is the potential change of plover nesting habitat to taller vegetation species through grazing management. For that reason, specialists have recommended against implementing additional intensive grazing systems. Further site-specific area analysis of these effects will be completed in the range management environmental assessments scheduled for 1994.

After consulting with the specialists, the Forest Service has determined that the activities predicted by the Reasonable Foreseeable Development scenario for future oil and gas development and the existing activities, and the existing casual dispersed recreation use are not significantly detrimental to the plover and its nesting habitat, when the previously discussed mitigation measures are implemented. Monitoring of the effects of all management activities will be implemented, based on the availability of funds, personnel, and resources.

Based on the above discussions and analyses, I believe that Alternative 4 is the appropriate interim management for the plover and its nesting habitat on the Pawnee.

III. PUBLIC INVOLVEMENT CONDUCTED

The public involvement for the FEIS and this ROD is described in Chapter 6 of the FEIS.

Publication of the Final Environmental Impact Statement culminates an effort to involve the public in the management strategy developed for mountain plover on the Pawnee National Grassland, Weld County, Colorado. Initial scoping efforts focused on identification of area-specific issues and concerns. Three public meetings were held; two in Greeley, Colorado and one in Denver, Colorado. The meetings were announced in the Rocky Mountain News and The Greeley Tribune newspapers. Prior to the May 13, 1992 meeting, all identified interested parties were mailed a letter listing a range of management actions that could occur after formulating and implementing a mountain plover management strategy. A total of 34 comments were recorded at these meetings. Twenty-three letters were received prior to the June 15, 1992 deadline for public comment. Three additional letters were received after the deadline. All letters received were considered during the preparation of the Draft EIS. One letter correcting a comment was received. The issues and concerns were used to refine the proposed action and develop alternatives responsive to the interests of a variety of publics. The objective of this information effort was to aid the public understanding of the Forest Service proposal and to gain new information that could affect the analysis.

The second phase of public involvement came with the publication of the DEIS on June 15, 1993. The objective of this information effort was to aid public understanding of the Forest Service proposal and to gain new information that could affect the analysis. The public comment period served as a means of rechecking public issues and concerns, as well as a way of gauging public reaction to the Forest Service proposal. The results are documented in the FEIS.

An open house meeting was held in Greeley, Colorado, on August 25, 1993, to answer questions and help commenters clarify and/or formulate comment. Three individuals attended. Substantial comments from the meeting were reiterated in the commenters letter. Twelve letters were received prior to the September 11, 1993 deadline for public comment. Eleven additional letters were received after the deadline. All comments received were considered and used as the basis for revising the DEIS, and are discussed in Chapter 6 of the FEIS.

Issues were identified through the public notification and scoping process. The following are the major issues identified through scoping, and served as a basis for alternative development.

- Impacts of livestock grazing on plover habitat. Some parties feel the Grassland is so heavily grazed that habitat capability for plover is being reduced. Others feel heavier grazing is needed to create more nesting areas. Current Grassland Allotment Management Plans favor rotation grazing systems, a more intensively managed system that leads to a diversity of vegetative stages. There is concern that rotation systems decrease plover nesting habitat. Others maintain that some diversity of vegetation is necessary for the plover. Other concerns focus on the impact of livestock trampling on nests and young birds and the timing of livestock presence in plover habitat.
- Impacts of authorizing additional federal oil and gas leases on plover habitat. There is concern that development on new and/or existing leases and privately owned minerals may be detrimental to the plover population and habitat capability. Comments ranged from supporting continued leasing to supporting delays in leasing decisions while analyzing the effects of oil and gas development on the species. Others question the significance of the actual amount of Federal land surface disturbance from oil and gas activities when compared to the amount of unoccupied habitat. Some suggest horizontal drilling as an option to consider.
- Recreation use may have detrimental effects on plover populations. Some believe restrictions on OHV use have been made without factual data. Some believe education of recreationists will be sufficient to minimize impacts to mountain plover.
- Impacts of mountain plover protection on the development of other Grassland resources. There is concern that mountain plover protection may result in unreasonably restrictive limits on oil and gas development, mineral development and grazing activities. There is concern that such restrictions will discourage development and will cause a reduction in national mineral reserves, as well as affecting companies and individuals.

Revenues generated from grazing fees and oil and gas lease rental and production royalties are important to the State, Weld County and local governments, and some feel these revenues should be included when assessing alternatives.

- Methods for improvement of mountain plover habitat. There is concern about the methods the Forest Service should use to improve plover habitat. Suggestions include utilizing prescribed fire, increasing prairie dog numbers, using intensive grazing systems, and reintroducing bison.
- Interim management. Some people believe there is not enough information available to warrant restrictions on Grassland activities during the EIS process and while the plover is being studied. Others believe management restrictions must be imposed to protect the plover. The oil and gas industry feels it is being restricted to a much greater degree than other resources, and states that valid existing federal lease and private mineral estates must be respected. Some feel that test areas need to be designated where the effects of management actions can be determined.

The Bureau of Land Management is a cooperating agency for the FEIS. Other public agencies, including the US Fish and Wildlife Service, National Biological Survey, and the Colorado Division of Wildlife were closely involved throughout the entire process. They provided consultation, data, and analysis pertinent to the FEIS and the decision of this ROD.

IV. ALTERNATIVES CONSIDERED

The alternatives I considered in making my decision are described in detail in CHAPTER 2 of the EIS. The alternatives are summarized below:

Alternative 1 - No Action. Continue Resource Management Currently Prescribed in the Forest Plan. Alternative 1 serves as a benchmark for comparison. The activities of this alternative will continue present management.

In summary, Alternative 1 management includes:

- Vegetation and wildlife biodiversity may increase through implementation of intensive grazing systems to increase upper seral representation in some range sites. Grazing will continue at the present stocking rates. Additional range improvements will be constructed.
- Recreation opportunities for the increased Colorado Front Range population will increase with additional trails, interpretive signing, and additional facilities at the Pawnee Buttes.
- Federal oil and gas leasing will continue. Oil and gas resources will continue to be developed in private and federal mineral estates, with stipulations providing needed mitigations to minimize the loss of effective habitat.
- No travel restrictions in plover habitat will occur.
- The affected plover habitat effectiveness from human activities (based on the 30 acre area of avoidance previously discussed) includes:
 - 1. Oil and gas activities (Forest Service) - 1,500 acres.
 - 2. Recreation activities - 5,434 acres.
 - 3. Heritage resource surveys - 500 acres.

4. Range activities (Maintenance of 165 improvements)	- 4,950 acres.
5. Intensive grazing systems (long term affected acres)	- 17,249 acres.
6. Special uses	- 1,000 acres.
7. Travel activities on roads	- 8,727 acres.
Total	<u>39,360 acres.</u>

These actions affect 22.8% of the potential nesting habitat on the Grassland.

This alternative was not selected because of concerns with the continued implementation of intensive grazing systems that could decrease plover nesting habitat by 17,249 acres over the next decades, approximately 10 percent of the available nesting habitat on the Grassland. As the amount of nesting habitat is crucial to contribute to a viable population, this management was not chosen. Other resource management activities did not have sufficient mitigation to protect the species and its habitat, as discussed in the FEIS Chapter 4.

Again, note that the 240 acres affected by oil and gas activities managed by the BLM is not included in the above estimate.

Alternative 2 - (DEIS Proposed Action). Manage Resources to Maintain Mountain Plover Populations and Habitat Capability Until the Requirements of the Species to Maintain Viable Populations Have Been Determined and Can Be Implemented on the Pawnee National Grassland. This alternative provides interim management actions that will concentrate on maintaining conditions known to be favorable to mountain plover while halting activities known to be detrimental, or those activities where effects are currently unknown but have potential to be detrimental to mountain plover.

In summary, Alternative 2 management includes:

- Actions will favor the plover and those wildlife species with habitat needs in the existing habitat, and may not favor other FWS species of concern.
- Habitat and vegetative biodiversity from resource management will be maintained at current levels.
- Dispersed recreation opportunities will not increase.
- Decisions on federal oil and gas leasing will be delayed, resulting in decreased development of the mineral resource. Drilling will continue on private minerals and may continue on existing federal leases. The number of active wells may decrease slightly as producing wells are plugged and abandoned. If evidence indicates oil and gas development does not have significant detrimental effects on the plover or its habitat, leasing will be authorized with the appropriate stipulations where needed, as currently prescribed in the Forest Plan.
- Livestock grazing will continue at the present stocking rate.
- Additional intensive grazing systems will not be implemented to minimize decreases in plover nesting habitat. Brooding and rearing habitat will not be increased. Existing grazing systems will continue.
- When critical habitat is identified, if necessary, it will be closed to public travel, if necessary.
- The affected plover habitat effectiveness includes:
 - 1. Oil and gas activities (Forest Service) - 1,440 acres.
 - 2. Recreation activities - 1,000 acres.

3. Heritage resource surveys	- 0 acres.
4. Range activities (Maintenance of 140 improvements)	- 4,200 acres.
5. Existing intensive grazing system affected acreage	- 5,369 acres.
6. Special uses	- 100 acres.
7. Travel activities	- 4,350 acres.
Total	16,459 acres.

This acreage is 9.5% of the potential nesting habitat on the Grassland.

This alternative was not selected because after consulting with the specialists of other agencies, the Forest Service determined that the effects of several managements could be mitigated to a level where they were not significantly detrimental. Oil and gas activities would be decreased in this alternative by suspending federal leasing, but as described in Chapter 4 of the EIS, the impacts can be mitigated. Also, because development can still occur on existing leases (a vested right to develop the lease) and private minerals under the Grassland (a legally deeded right the Forest Service cannot deny), the differences in reduced habitat effectiveness are not large. Regarding the affected acreage due to oil and gas activities, Alternatives 1 and 4 could affect 1500 acres of Grassland surface, and Alternatives 2 and 3, 1440 acres (based on expected future development, existing activities, and the plugging and abandonment of existing producing wells). The difference of 60 acres is not significant. The concerns with implementation of intensive grazing systems have previously been discussed. Recreation and other resource management requirements and mitigations were sufficient to protect the species.

The acreage affected by oil and gas activities managed by the BLM is considered to be the same as for Alternatives 1 and 4, 240 acres. However, with no additional leasing, the one additional producing well in the next ten years is less likely to be in plover nesting habitat than in Alternatives 1 and 4. As was previously discussed, 75 % of the private surface over the federal mineral estate is cultivated, weeds, or taller vegetation, and is not considered nesting habitat.

Alternative 3 - Improve Mountain Plover Nesting Habitat Capability to Reduce Risk of the Species Becoming Threatened or Endangered. The activities in this alternative will focus on protection of the birds and creation of optimum nesting habitat conditions to contribute to viable plover populations.

In summary, Alternative 3 management includes:

- Actions will favor the plover and those wildlife species with habitat needs similar to plover, and may not favor other FWS species of concern.
- Habitat and vegetative biodiversity from resource management will decrease as existing intensive grazing systems are removed.
- Dispersed recreation opportunities will decrease as the Bird Tour will be closed.
- To eliminate further disturbance to the plover and its habitat, no leasing of federal minerals will occur, resulting in decreased development of the mineral resource. Drilling will continue on private minerals and may continue on existing federal leases. The number of active wells will decrease as wells are plugged and abandoned.

- Livestock grazing will continue at the present stocking rate under systems promoting habitat homogeneity. Existing intensive grazing systems will be eliminated to increase nesting habitat.
- When critical habitat is identified, it will be closed to public travel, if necessary. Other restrictions on travel off the roadways will be enforced.
- The affected plover habitat effectiveness includes:

1. Oil and gas activities (Forest Service)	- 1,440 acres.
2. Recreation activities	- 500 acres.
3. Heritage resource surveys	- 0 acres.
4. Range activities (Maintenance of 140 improvements)	- 4,200 acres.
5. Range management (elimination of existing intensive systems)	- 0 acres.
6. Special uses	- 100 acres.
7. Travel activities	- 1,000 acres.
	Total 7,240 acres.

This acreage is 4.2% of the potential nesting habitat on the Grassland.

Alternative 3 was not selected because the requirements would maximize the nesting habitat by prohibiting some recreation activities, minimize oil and gas activities by not issuing additional federal leases, and remove the existing intensive grazing systems. After consulting with the specialists of other agencies, the Forest Service has determined that these actions are not needed to contribute to a viable plover population.

The effect of leasing the BLM managed minerals is discussed in the summary for Alternative 2.

Alternative 4 - (Forest Service Preferred Alternative). Manage Resources to Maintain Mountain Plover Populations and Habitat Capability Until the Requirements of the Species to Maintain Viable Populations Have Been Determined and Can Be Implemented on the Pawnee National Grassland. Resource Managements That Are Not Significantly Detrimental Separately or Cumulatively Will Be Continued as Described in the Forest Plan, or With Needed Mitigation. See Section 2 of this ROD for a complete description of Alternative 4.

I selected Alternative 4 because it provides protection to the plover and its habitat through mitigation for oil and gas activities, recreation, and wildlife, lands, heritage resources, and travel management. Continued implementation of additional intensive grazing systems will be suspended, pending site-specific area analyses to examine the effects of these actions, and the decrease in existing nesting habitat will be minimized.

The alternatives considered in detail address the substantive issues raised. The alternatives range from continuing present management, to no activity, to restricting certain activities. All would incorporate the monitoring and research for environmental concerns described in Alternative 4.

Based on the issues discussed earlier, the following alternatives were considered, but were eliminated from detailed analysis. A possible alternative considered no recreation, no livestock grazing, and the utilization of controlled burning instead of grazing over the entire Grassland. It was not considered in detail because grazing has been well-documented to be beneficial to mountain plover. The range of alternatives considered in detail discuss

different intensities of grazing. The effects of controlled burning on plover habitat, including food sources, have not been studied. Also, complications due to a diverse landownership pattern make controlled burning of large areas impractical. Prohibiting the many casual dispersed recreation uses that occur on the Grassland is not realistic due to the personnel, resources, and funding required for enforcement.

Mitigation:

The FEIS and this ROD discuss the mitigation measures that will be implemented to protect the plover and its nesting habitat on the Grassland. In addition to those measures, all alternatives will safeguard other Grassland resources by following direction of the Forest Plan. All management decisions and activities occurring on the Grassland will be in compliance with the Endangered Species Act for any listed species, including the mountain plover if it is listed in the future.

The Forest Plan and the Mineral Leasing Supplement of 1985 to the Forest Plan contain goals, objectives and management requirements necessary to mitigate adverse environmental effects that may occur as a result of oil and gas exploration and development. Forest Service, BLM, and Colorado Oil and Gas Conservation Commission regulations, policies, direction, and interagency agreements provide requirements for protection applicable to all resources, including the plover and other wildlife.

V. FINDINGS REQUIRED BY OTHER LAWS

The regulations (36 CFR 219.10(e)) require me to ensure that activities carried out on the Pawnee National Grassland and Arapaho and Roosevelt National Forests are consistent with the Forest Plan. Accordingly I have reviewed my decision against Forest Plan direction, and made the following determinations:

1. Management Area prescription 6B emphasizes livestock grazing and management for sustained forage growth. On the Grassland, this includes implementation of intensive grazing systems. As the Alternative 4 may not follow this direction, pending site-specific area analysis of the effects of intensive systems, an amendment may be needed for plover habitat maintenance.
2. Amendment 19 to the Plan regarding Forest and Grassland Land Adjustment planning will be amended to include criteria to maintain or increase plover nesting habitat.
3. The management described in Alternative 4 for recreation, mineral, wildlife, heritage resources, travel, lands, and other activities is consistent with the Forest Plan and no amendments are required.

Consistency is based upon a comparison of the expected and predictable results of an alternative to the standards and guidelines contained in the current Forest Plan. Some standards and guidelines require a rigorous achievement of a certain level of result. Others require achievement where possible or as circumstances warrant. Examples are the requirements to achieve habitat potential at 40%, a Forest Plan standard, or to a level that will assure viable

populations; both of these have fairly finite and definable limits. Recreation and leasing standards are not as rigorous in their requirement for a certain level of achievement and contain language that provides levels of discretion and flexibility not contained in the previous examples. If an alternative has an effect that will reduce or increase the level of satisfaction of some objectives, but will not fall beyond the limits of the standards and guidelines, it is considered to be consistent with the Plan.

NFMA and its implementing regulations also require that management as established in the Forest Plans, including standards and guidelines, be such as to maintain viable populations of existing native vertebrate species.

Policy of the Secretary of Agriculture (Department Regulation 9500-4) requires maintenance of habitats in order to maintain at least viable populations. It also requires that agencies avoid actions that cause a species to become threatened or endangered. Alternative 4 provides the best assurance at this time that actions on the Pawnee with potential to significantly adversely affect the plover will be avoided, and that the management that are authorized are not significantly detrimental.

Executive Orders 11988 and 11990: Floodplains and wetlands associated with riparian areas on the Grassland will not be affected by the management activities of the preferred alternative.

Endangered Species Act: There will be no adverse effects on any threatened or endangered species as a result of the management activities of the preferred alternative.

National Historic Preservation Act: No adverse effects to heritage resources will occur as a result of the management activities of the preferred alternative.

Federal Water Pollution Control Act of 1972: No adverse effects from pollution of wetlands on the Grassland will occur as a result of the management activities of the preferred alternative.

State standards for air and water quality: No adverse effects will occur as a result of the management proposed in the preferred alternative.

VI. ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is more difficult to define in this FEIS than in other similar documents. The alternative that maximizes plover nesting habitat on the Grassland is Alternative 3, as resource activities would be severely restricted or eliminated. Oil and gas leasing would not be resumed, and drilling of wells from those leases would not occur. Recreation and other management activities would be prohibited where detrimental effects to the plover would occur. Existing intensive grazing systems would be eliminated. All known detrimental effects would be prohibited, including those that are not significantly detrimental, and additional nesting habitat would be created. However, the potential for biodiversity would be minimized. Also,

the alternative maximizes nesting habitat at the possible expense of brooding and rearing habitat, which may have a detrimental effect on the plover.

Alternatives 2 and 3 were not selected as analyses determined that the effects of some resource management, including oil and gas development and current recreation use, were not significantly detrimental, separately or cumulatively.

However, Alternative 1, no action different from the direction described in the Forest Plan, may be the best ecosystem management alternative, and the environmentally preferred action in the long term. Increased biodiversity of flora and fauna would result from the implementation of intensive rotation grazing systems. Other activities would not be as restricted, and some loss of plover nesting habitat effectiveness would occur. Alternatives 2, 3, and 4 may result in management of the Grassland for a single species, the plover, to the detriment of other wildlife species and vegetation.

Alternative 1 was not selected based on the information available at this time, that emphasized the need for continued season-long grazing to maintain plover nesting habitat.

VII. IMPLEMENTATION DATE

My decision can be implemented 50 days after the public notice is published in the appropriate newspapers.

VIII. RIGHT TO ADMINISTRATIVE REVIEW

My decisions are subject to administrative review pursuant to 36 CFR 215. Any appeal of my decision must be fully consistent with 36 CFR 215.14, Content of Notice of Appeal, including reasons for appeal, and must be filed with:

Elizabeth Estill, Regional Forester
Rocky Mountain Region
Box 25127
Lakewood, CO 80225

within 45 days of the date of my decision, with a concurrent copy to me:

M.M. Underwood, Jr., Forest Supervisor
Pawnee National Grassland and Arapaho and Roosevelt National Forests
240 West Prospect Road
Fort Collins, CO 80526

For additional information concerning my decision or the Forest Service appeal process, contact:

Roger Tarum
Pawnee National Grassland and Arapaho and Roosevelt National Forests
240 West Prospect Road
Fort Collins, CO 80526
Phone (303) 498-1202

For additional information on the Final Environmental Impact Statement,
contact:

Jeffrey M. Losche, District Ranger
Pawnee National Grassland
660 "O" Street
Greeley, CO 80631
Phone (303) 353-5004

M. M. Underwood
M. M. UNDERWOOD, JR.
Forest Supervisor

3/28/94
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